(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 0 944 030 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
22.09.1999 Bulletin 1999/38

(51) Int. Cl.[6]: G07F 17/34

(21) Application number: 99104553.5

(22) Date of filing: 08.03.1999

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: 20.03.1998 US 44959

(71) Applicant: WMS GAMING, INC.
Chicago, Illinois 60618 (US)

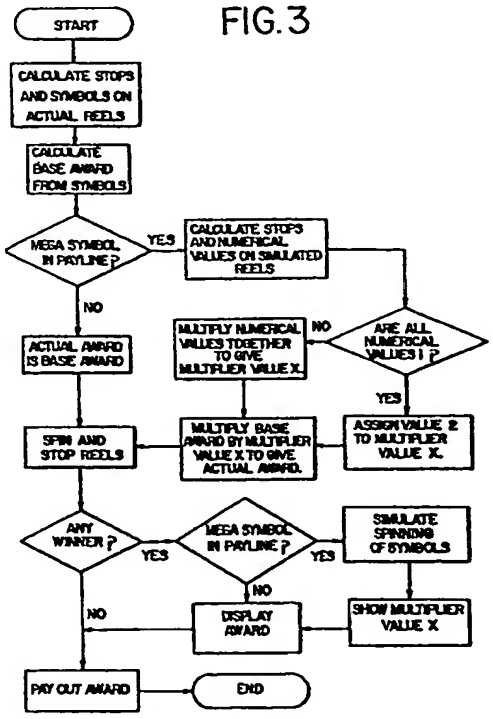
(72) Inventors:
- Delott, Roger A.
Chicago, IL 60618 (US)
- Thomas, Alfred
Chicago, IL 60618 (US)

(74) Representative:
Viering, Jentschura & Partner
Postfach 22 14 43
80504 München (DE)

(54) Gaming machine with video mode payoff multiplier

(57) A spinning reel slot machine gives a multiplied payoff when certain conditions are fulfilled. Wins including a special symbol on the pay line are multiplied by a multiplier value generated according to the rules of a secondary game. The secondary game is a computer simulation or a video display of a set of reels which simulate the operation of a physical set of reels, and have symbols representing different numerical values. The values on the computer generated reels when they stop are multiplied together to generate the multiplier.

FIG.3



EP 0 944 030 A2

Description

BACKGROUND OF THE INVENTION

[0001] This invention relates to gaming machines. More specifically, it relates to spinning reel type slot machines.

[0002] Spinning reel slot machines have maintained their popularity, evolving from electromechanical devices to the present day devices which employ microprocessor control. In modern devices, the spinning reels are used merely as a display to advise a player if she has won or lost a game of chance played entirely in a computer memory according to the rules embedded in a computer program. Such machines may have further displays, in addition to the reels, on which other aspects of the game are displayed. In the past, such displays have included "trail games" wherein an indicator proceeds along a board game style trail providing different features. These features might include nudges and additional gamble features awarding prizes.

[0003] Spinning reel slot machines generally provide different symbols on each of the reels, and give payoffs when a plurality of the symbols displayed in a certain position on each reel, are the same. The relevant position is usually along a horizontal line referred to as the payline. However, other payoff schemes have been developed. For example, US 5,205,555 (Masahiro) discloses a machine with values on the reels, instead of symbols. A mathematical operation is performed on values displayed on the payline to determine the value of an award. This type of scheme has the disadvantage that it is not easily understood by regular players of the slot machines, who are used to a system of symbols and payoffs.

[0004] It has also become common practice to provide spinning reel slot machines with a secondary game which is activated only when certain special symbols appear in winning combinations. Frequently, the secondary game will be provided on a dot matrix screen disposed above the reels, and will be generated by a computer program. Often, during the course of the operation of the secondary game, a multiplier is established, by which the standard payoff for the winning combination is multiplied to provide the actual payoff. A game with such a feature is discussed in US Patent Application 08/998,139 also assigned to the present assignee. This type of game has the advantage that bigger jackpots can be provided when both a winning combination on the reels and a high multiplier on the feature occur, because such occurrences can be made to be very rare. It is important that this feature is simple to understand and exciting so that a player will choose the machine in question over other spinning reel slot machines.

[0005] It is also important that it is straightforward for a machine operator to adjust the payoff rate, and it is therefore advantageous in the payoff rate is related to the parameters used in the payoff tables in as simple a way as possible.

[0006] Spinning reel slot machines known in the art pay out wins at a set rate per second. This rate is generally fairly slow to give the impression that a lot of credits are being paid out, and to increase the interest of other players in the machine. However, this slow payoff rate can be annoying to players who are well acquainted with the game and wish to resume play as soon as possible. The present invention provides a player selectable payoff rate.

SUMMARY OF THE INVENTION

[0007] In a first aspect, the present invention is a spinning reel slot machine in which selected payoffs are multiplied by a variable value which is independent of the winning symbol combination whereby to increase player interest in the game.

[0008] By multiplying the payoff for selected wins by a variable value, the maximum possible payoff achievable is increased significantly, whereby increasing player interest. However, as only selected payoffs are multiplied by the variable value, the overall payoff is not increased significantly. Furthermore, as the variable multiplier is not dependent on the selected payoff, it is very straightforward to calculate and modify the overall payoff of the machine.

[0009] The present invention provides a spinning reel slot machine which provides a secondary game when certain conditions are met in the combination of symbols displayed on the reels after a spin. The secondary game takes place on a display and involves the simulation of a set of reels on the display. The spinning of these reels is simulated and the combination of symbols which results from the simulated spin is used to generate a multiplier for a payoff obtained in the spin of the actual reels.

[0010] In a specific implementation of the invention, the symbols simulated on the reels are numerical values and the product of these values is used as the multiplier.

[0011] In an a adaptation of this implementation, if a multiplier value of 1 is obtained, the multiplier is increased to 2, so that a multiplier greater than 1 is always obtained.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012]

FIGURE 1 is a simplified illustration of a spinning reel slot machine according to a preferred embodiment of the present invention.

FIGURE 2 is an enlargement of the slot machine display showing how physical symbols appear on, above and below the payline in the preferred

embodiment.

FIGURE 3 is a flowchart showing a specific embodiment of the preferred embodiment of the present invention.

FIGURE 4 is a table showing three sets of 22 symbols on the three reel strips according to a specific example of a first embodiment of the present invention.

FIGURE 5 is a table showing the prizes awarded in the four modes of the example of the first embodiment.

FIGURE 6 shows the contents of the display shown in Figure 1 during operation of a secondary game.

FIGURES 7a, 7b and 7c are tables showing reel strips used to calculate a multiplier value.

FIGURE 8 is a table showing a reel strip mapped onto by the reel strip of Figure 7c.

FIGURE 9 is a table showing the expected payoff for each winning combination in each mode, the sum of the expected payoffs, and the percentage total payoff.

FIGURE 10 is a flowchart representing the payoff scheme of a specific embodiment of the present invention.

DETAILED DESCRIPTION OF A SPECIFIC EMBODIMENT OF THE INVENTION

[0013] Figure 1 shows an overall view of a first embodiment of the present invention, there is provided a spinning reel slot machine 2 comprising a cabinet 10 having windows 12, 14, 16 on the front which can be viewed by a player standing in front of the machine. As in most spinning reel slot machines, behind the window three reels 22, 24 and 26 are mounted for rotation. A portion of the outer surface of each reel is visible through the corresponding window as shown in Figure 2. Each reel has 22 regularly spaced locations which either have symbols represented thereon or are left blank. The spatial allocation of these symbols is shown in Figure 4. Each window is preferably dimensioned to display three consecutive locations on each reel at a time. The reels are each individually driven by a stepper motor which is controlled by a microprocessor as is known in this art. Circuitry is provided so that the microprocessor can send instructions for the reel to spin and to stop at a predetermined position. As shown in Figure 2, whenever all the reels are stopped, a three-by-three rectilinear array of symbols is displayed. The row of three symbols across the center of this three by three array is deemed to be located on the payline 20, and the symbols appearing on this line determine the prizes paid out as described below. For a typical 22 stop reel, the symbols and frequency of occurrence are selected based on probability analysis. These symbols are designed in an eye-catching manner.

[0014] A handle 21 or a switch button is provided on the machine, by which a player can commence cycles of the game after inserting money or tokens to buy credits.

[0015] To operate the game, a player puts coins or bills into the game and the value is determined by the processor and stored in computer memory. The number of credits thus purchased is displayed on another display not shown. Depending on how many modes the game has, different switch buttons are provided to start the game in the appropriate mode.

[0016] If sufficient credit has been purchased, the handle 21 can be pulled or the appropriate switch button operated. This commences a cycle of operation of the machine, whereby the reels 22, 24, 26 begin to spin under the control of the game microprocessor. The machine enters the mode corresponding to the number of credits which have been wagered, and deducts the appropriate number of credits from the stored value.

[0017] The operation of the game when a cycle of operation is commenced is hereinafter described with reference to Figure 3. The microprocessor generates one or more random numbers to determine what the symbols on the payline will be. Typically, the memory contains a look up table representing the symbols, as shown in Figure 4. The processor assigns the symbols shown to registers in memory for use in calculating the payoff. The microprocessor then determines if the combination is a winning combination as described in detail below, and calculates any payoff depending on the symbols showing. A specific example of such a calculation is described later. Typically, payoffs are all based on multiples of the smallest number of credits needed to play a game. However, some additional inducement may be expressed to encourage multiple credit play.

[0018] Once all calculations have been done, the microprocessor spins the reels and causes the reels to stop at the appropriate locations corresponding to the random number selected for each reel. Usually, the processor stops the left reel 22 first, followed by the center reel 24 and finally the right reel 26. When the reels have stopped spinning, any win is displayed and the payoff is ether released into a coin discharge trough 28 or added to the stored credits.

[0019] An example of a specific embodiment will now be described in detail. It has four modes of play referred to as 1 Coin, 2 Coin, 3 Coin and MaxBet modes and requiring 1, 2, 3 or 4 credits, respectively.

[0020] The symbols in this example of the embodiment are 1BAR, 2BAR, 3BAR, MEGA, STAR, SEVEN and BLANK, and their distribution on the reel strips is shown in Figure 4. The bar symbols are referred to generically as BARS.

[0021] The normal payoff for any winning combination on the payline 20 is shown in the table of Figure 5. The prize paid out for each of the winning combinations listed in the columns labeled Reel 1-Reel 3 is shown in the 1 Coin, 2 Coin, 3 Coin and MaxBet (4 coins) columns and depending on the number of credits bet. The game program checks the selected combination against each of the combinations in Figure 5, starting with the highest paying win at the top of the table and progressing to the lowest paying win at the bottom. The numeric value representing the payoff is a multiple of ore credit. As can be seen, the MEGA symbol is wild and can replace any symbol in a winning combination.

[0022] Importantly, when a winning combination including a MEGA symbol occurs on the payline, a secondary game is commenced in a dot matrix display 44 shown in Figure 1, which generates a multiplier value by which to multiply the secondary payoff associated with the winning combination.

[0023] When the secondary game is commenced by the occurrence of the MEGA symbol, graphical representations of three reel strips are shown on the display 44, as shown in Figure 6. The computer generated reel strips of the secondary game have 36 symbol locations. They do not show symbols as do physical reels 22, 24 and 26, but instead show multiplier values. Examples of these computer generated reel strips are shown in Figures 7a and 7b. In this example, these multiplier values for each reel range from 1 to 3 in Figure 7a and 1 to 5 in Figure 7b. The multiplier value 1 may be represented by a blank display, as multiplication by one has no effect on the resulting payoff. Thus, the middle reel strip in it configuration shown in Figure 6 represents the number 1.

[0024] The microprocessor runs a computer program, discussed further in connection with Figure 10, which generates visual representations of spinning reels on the display 44. The microprocessor, as with the physical reel selection, generates random values representing the positions (multiplier values) which it will display. The computer program stops the animations at the appropriate time to display the selected multipliers across the payline of the video simulated reel display.

[0025] The multiplier values displayed along the payline are multiplied together to produce a combined multiplier value X by which the regular game payoff will be multiplied. For example, if the regular payoff is 30 credits, and multiplier values displayed on display 44 are 2, blank and 3, as shown in Figure 6, the multiplier value will be 6 (2 x 1 x 3), and the payoff will be 180 credits (6 x 30).

[0026] The mean of the values on each of the reel strips are μ_1, μ_2 and μ_3, it is elementary to show that the expected value for the multiplier X is as follows:

$$X = \mu_1\mu_2\mu_3 \quad (1)$$

However, if all the symbols in the computer generated payline are blank (ie. all the values in the payline are 1), this multiplier value X will be 1. The player would not then receive an enhanced payoff for achieving a MEGA symbol in the physical reel game. In order to overcome this, in the event that the product of the three multiplier values of the computer generated reels is 1, the value of multiplier X is arbitrarily set to 2.

[0027] If the probabilities of obtaining a 1 on each of the computer generated reel strips is p_1, p_2 and p_3 respectively, it is straightforward to show that the expected value$_m$X of the modified multiplier will be:

$$X_m = \mu_1\mu_2\mu_3 + p_1p_2p_3 \quad (2)$$

[0028] In the case of this specific embodiment, one set of computer generated reel strip values is used in the first three modes (Figure 7a), and a different set is used in the MaxBet mode (Figure 7b). The computer generated reel strips used in the rust three modes have values ranging from 1 to 3. The maximum multiplier which can be obtained with such a range of values is accordingly 27. The expected multiplier value generated by these reel strips is referred to hereinafter as X_1. Using equation 2, it is easy to calculate the value X_1 with the values of the reel strips shown in Figure 7a. The expected value of X_1 is 4.44.

[0029] The computer generated reel strips of the MaxBet mode are shown in Figure 7b, and contain values from 1 to 5. The maximum multiplier which can be obtained with such a range of values is accordingly 125. If this multiplier value is obtained in conjunction with the maximum paying winning combination of 200 credits, a win of 25,000 credits can be obtained. The expected multiplier value generated by the sets of values shown in Figure 7b is referred to hereinafter as X_2. Using equation 2, it is easy to calculate the value X_2 with the values of the reel strips shown in Figure 7b. The expected value of X_2 is 7.08.

[0030] Instead of the arrangement shown in Figures 7a and 7b, an extended reel with mapping can be used for the secondary games as shown in Figures 7c and 8. The extended reel allows greater flexibility in the display of multiplier values on the simulated reel display 44. This allows the game to be percentaged more easily and makes for a more exciting display above and below the simulated payline. The extended reel can either have a larger number of "stop" positions or a mapping scheme can be utilized. In the latter case, for example, the 36 "stops" are mapped to a few prearranged video display frames of reel strips as represented in Figure 8. Increasing the number of stops mapped to the frames allows changes in the hold percentage.

[0031] Referring to Figure 5, note that the payoff formula for the 3 credit mode is the same as the same as the payoff formula for the 4 Credit mode. However, payoff in the 4 credit (MaxBet) mode is increased because the expected multiplier value X_2 (7.08) is significantly greater than the expected multiplier value X_1 (4.44).

[0032] The overall payoff of the machine in each of the

four modes can easily be calculated by multiplying the expected payoffs for each of the symbol combinations shown in the "Predicted Value" columns of Figure 5 by the proportion of the reel combinations which will generate each payoff, and then summing the result. These products, and the relevant sums are shown in Figure 9 for each of the four modes. Dividing these sums by the number of credits per play for each mode yields, and multiplying by 100 yields the percentage payoff in each case, and the associated percentage payoffs are also shown in Figure 9. The proportion of the reel combinations which will generate each payoff is calculated by dividing the number of reel combinations yielding that payoff value, as shown in the "No of ways to achieve" column of Figure 5, by the total number of reel combinations, which in this case is 10,648 (22^3).

[0033] It can be seen from the Percentage Payoffs shown in Figure 5 that in this example it is more advantageous for a player to play in the 3 credit mode than the 2 or 1 credit mode, and it is even more advantageous to play in the 4 credit mode. The reason is it more advantageous to play in the 3 credit mode than the 1 or 2 credit modes is that the payoff for a STAR MEGA STAR win ($200X_1$) is disproportionately larger than the values in the other two modes ($60X_1$ and $120X_1$).

[0034] The procedure followed when a win is paid out is shown in Figure 10. When the machine pays out after a win, a predetermined time delay is provided between the counting out of each credit to be paid. In this example the standard delay is 120 milliseconds (ms) per credit. However, if the game is in MaxBet mode, this delay is automatically set to 90 ms per credit, as more credits are likely to be won, and the player is likely to be more of an expert at the game.

[0035] In any case, if the player presses the MaxBet mode button after the reel spin is complete and before or during credit pay out, the delay on the remaining credits is set to 12 ms per credit won. Figure 10 illustrates the program flow chart permitting the implementation of this enhanced payout feature.

[0036] In modifications of the described embodiment, different values for the prizes and different symbols on the physical reels could be used. More reels, could be provided to provide more combinations, or more symbols could be provided on each reel. Extra features, such as nudges and holds, well known in the art could also be added to enhance gameplay.

[0037] While the invention has been illustrated and described in detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character, it being understood that only the preferred embodiment has been shown and described and that all changes and modifications that come within the spirit of the invention are desired to be protected.

Claims

1. A gaming machine including a set of spinning reels having a plurality of symbols thereon, means for spinning and stopping said reels to display symbols on a payline, means for paying out prizes, means for displaying a secondary game, and a processor operating according to a game program for controlling the spinning and stopping means, said processor including:

   a) means for randomly selecting symbols to be displayed by said spinning reels;
   b) means for determining if the selected symbols constitute a winning combination, and, if so, a corresponding standard prize amount;
   c) means for initiating play of a secondary game to generate a multiplier value, if a special symbol is included in said winning combination;
   d) means for calculating the prize to be awarded for said wining combination based on the standard prize amount multiplied by said multiplier value, if the winning symbol combination includes said special symbol;
   said means for initiating play of said secondary game including:

      i) means for randomly selecting at least two numerical values to be displayed by said secondary game; and

      ii) means for multiplying the numerical values to generate said multiplier value.

2. A gaming machine according to Claim 1 wherein said means for randomly selecting at least two numerical values comprises means for simulating reels on said display means, said simulated reels having symbols representing different numerical values.

3. A gaming machine according to Claim 2 wherein said means for initiating play of said secondary game further includes means for simulating the spinning of said reels before displaying said randomly selected numerical values.

4. A gaming machine according to Claim 1 wherein said means for playing a secondary game increases said multiplier value if it is not greater than a certain predetermined value.

5. A gaming machine according to Claim 4 wherein the predetermined value is 1.

6. A method of operating a gaming machine including a set of spinning reels having a plurality of symbols thereon, means for spinning and stopping said

reels to display symbols on a payline, means for paying out prizes, means for displaying a secondary game, and a processor operating according to a game program, comprising the steps of:

a) randomly selecting symbols to be displayed by said spinning reels;
b) determining if the selected symbols constitute a winning combination and a corresponding standard prize amount;
c) initiating a secondary game to generate a multiplier value in a special symbol is included in said winning combination; and
d) calculating the prize to be awarded for said winning combination based on the standard prize amount multiplied by said multiplier value, if the winning symbol combination includes said multiplier symbol;
said secondary game comprising the steps of:

i) randomly selecting at least two numerical values;
ii) displaying said values; and
iii) multiplying the numerical values together to generate said multiplier value.

7. A method of operating a gaming machine according to Claim 6 wherein said steps of randomly selecting at least two values and displaying said values comprises displaying a representation of at least two spinning reels on said display having said numerical values thereon.

8. A method of operating a gaming machine according to Claim 7 wherein said step of displaying a representation of at least two spinning reels further comprises displaying a simulation of the spinning of said reels before displaying said randomly selected numerical values.

9. A method of operating a gaming machine according to claim 6 wherein said means for playing a secondary game increases said multiplier value if it is not greater than a certain predetermined value.

10. A method of operating a gaming reel slot machine according to Claim 9 wherein the predetermined value is 1.

11. A gaming machine including a set of spinning reels having a plurality of symbols thereon, means for spinning and stopping said reels to display symbols on a payline and a processor operating according to a game program for controlling the spinning and stopping means, said processor including:

a) means for randomly selecting symbols to be displayed by said spinning reels;

b) means for determining if the selected symbols constitute a winning combination, and, if so, a corresponding prize amount; and

c) means for paying out said prize as a plurality of credits;
said means for paying at prizes including means for providing a delay between payment of successive credits, and means for adjusting said delay.

12. A gaming machine according to Claim 11 wherein said game program provides different modes which can be selected by a player of said game, and wherein said means for adjusting said delay adjusts said delay in accordance with the mode selected.

13. A gaming machine according to Claim 11 wherein said means for adjusting said delay comprises a player operable input device.

14. A method of operating a gaming machine including a set of spinning reels having a plurality of symbols thereon, means for spinning and stopping said reels to display symbols on a payline, and a processor operating according to a game program for controlling the spinning and stopping means, said method of operating comprising the steps of

a) randomly selecting symbols to be displayed by said spinning reels;

b) determining if the selected symbols constitute a winning combination, and, if so, a corresponding prize amount;

c) paying out said prize as a plurality of credits;
wherein said step of paying out prizes comprises a further step of providing a delay between payment of successive credits, and adjusting said delay.

15. A method of operating a gaming machine according to Claim 14 wherein said game program provides different modes which can be selected by a player of said game, and wherein said step of adjusting said delay comprises adjusting said delay in accordance with the selected mode.

16. A method of operating a gaming machine according to Claim 14 wherein said gaming machine comprises user operable input means, said step of adjusting comprising adjusting said delay in response to operation of said user operable input means.

FIG.1

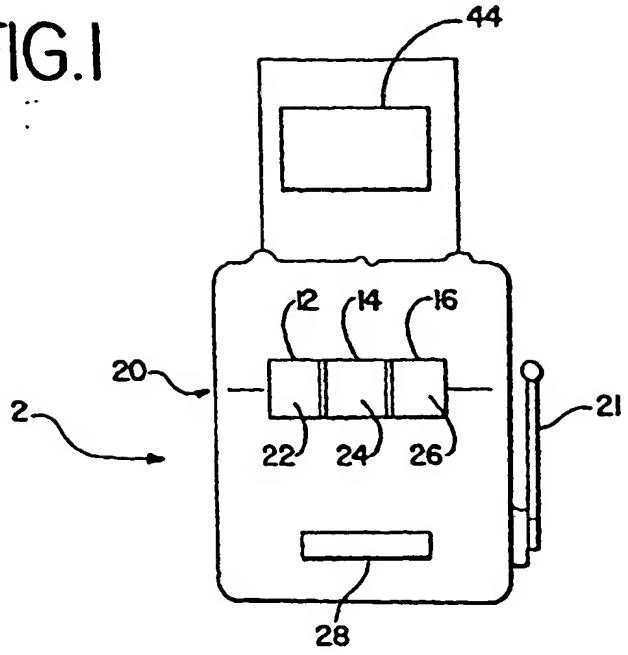

44
12
14
16
20
2
21
22
24
26
28

FIG.2

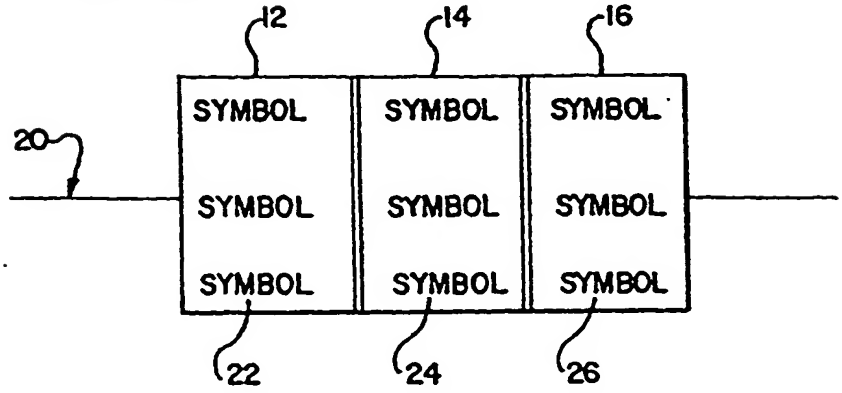

12
14
16
20
SYMBOL
SYMBOL
SYMBOL
SYMBOL
SYMBOL
SYMBOL
SYMBOL
SYMBOL
SYMBOL
22
24
26

FIG. 3

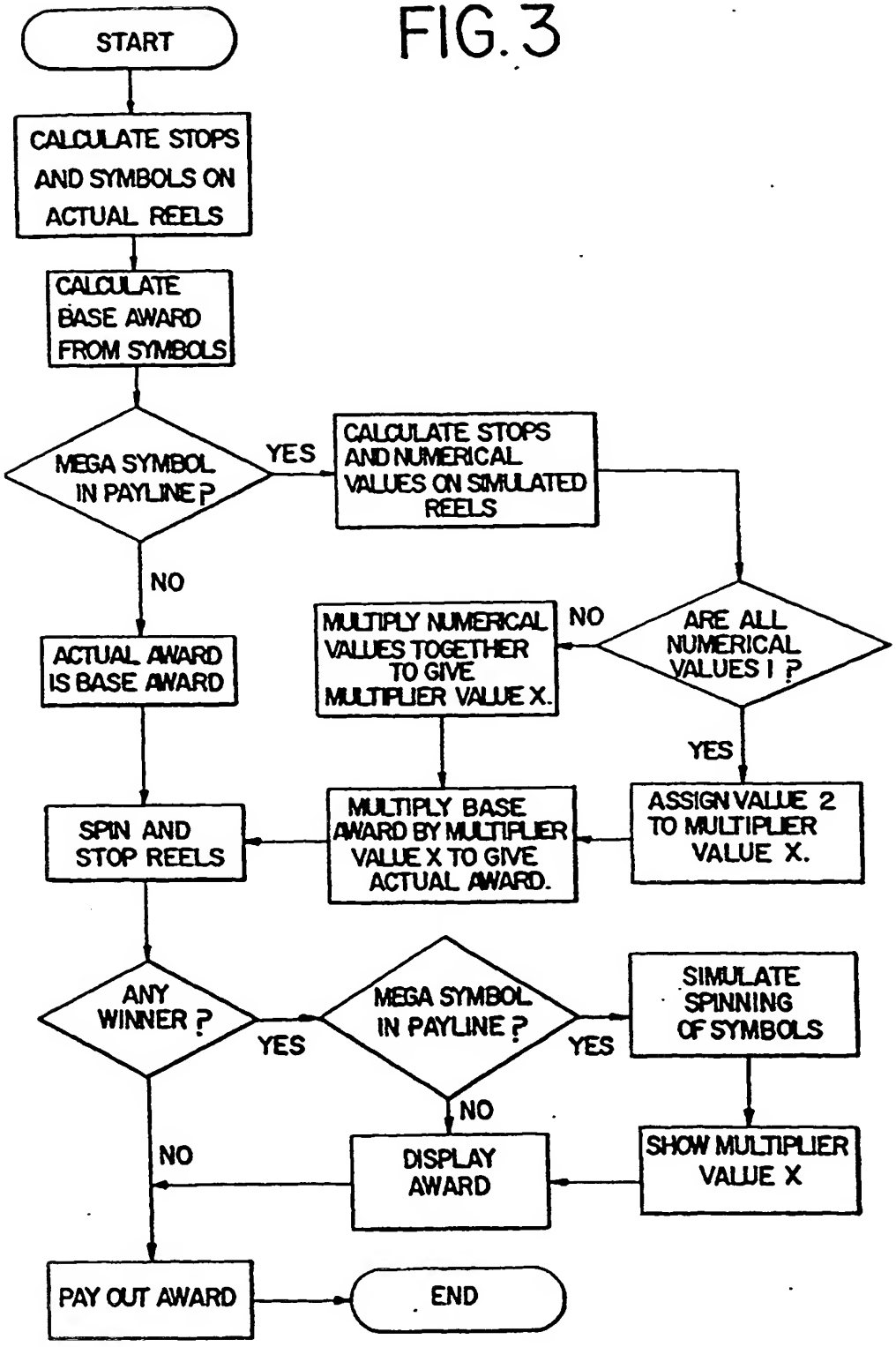

START
CALCULATE STOPS AND SYMBOLS ON ACTUAL REELS
CALCULATE BASE AWARD FROM SYMBOLS
MEGA SYMBOL IN PAYLINE ?
YES
CALCULATE STOPS AND NUMERICAL VALUES ON SIMULATED REELS
NO
ACTUAL AWARD IS BASE AWARD
MULTIPLY NUMERICAL VALUES TOGETHER TO GIVE MULTIPLIER VALUE X.
NO
ARE ALL NUMERICAL VALUES 1 ?
YES
SPIN AND STOP REELS
MULTIPLY BASE AWARD BY MULTIPLIER VALUE X TO GIVE ACTUAL AWARD.
ASSIGN VALUE 2 TO MULTIPLIER VALUE X.
ANY WINNER ?
YES
MEGA SYMBOL IN PAYLINE ?
YES
SIMULATE SPINNING OF SYMBOLS
NO
NO
DISPLAY AWARD
SHOW MULTIPLIER VALUE X
PAY OUT AWARD
END

FIG.4

	REEL 1	REEL 2	REEL 3
1	STAR	2BAR	STAR
2	BLANK	BLANK	BLANK
3	2BAR	1BAR	1BAR
4	BLANK	BLANK	BLANK
5	3BAR	MEGA	2BAR
6	BLANK	BLANK	BLANK
7	1BAR	2BAR	3BAR
8	BLANK	BLANK	BLANK
9	2BAR	1BAR	2BAR
10	BLANK	BLANK	BLANK
11	SEVEN	SEVEN	SEVEN
12	BLANK	BLANK	BLANK
13	1BAR	1BAR	1BAR
14	BLANK	BLANK	BLANK
15	2BAR	2BAR	SEVEN
16	BLANK	BLANK	BLANK
17	1BAR	3BAR	2BAR
18	BLANK	BLANK	BLANK
19	3BAR	2BAR	1BAR
20	BLANK	BLANK	BLANK
21	1BAR	SEVEN	3BAR
22	BLANK	BLANK	BLANK

FIG.6

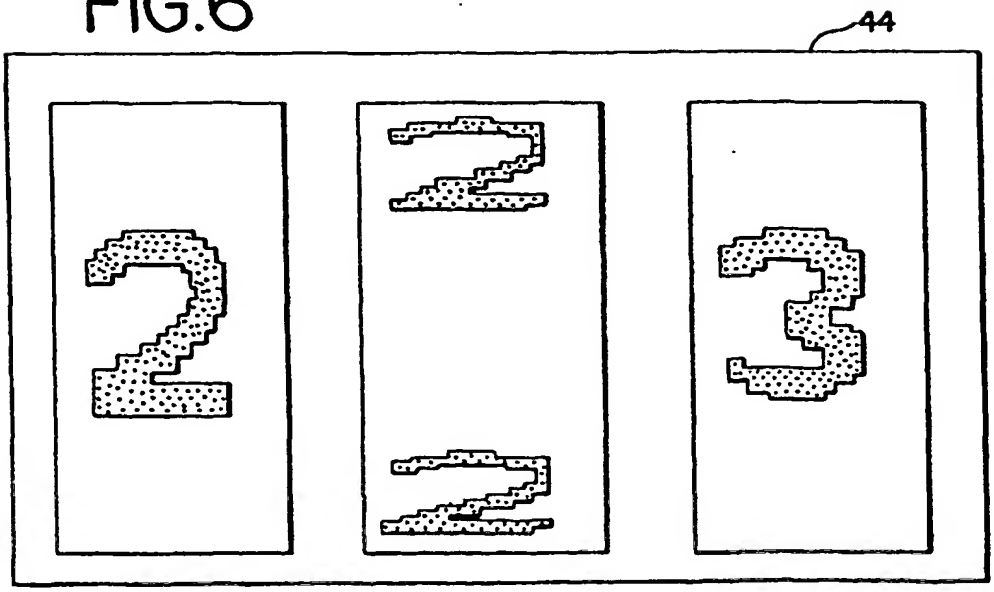


FIG.5

INDEX	REEL 1	REEL 2	REEL 3	NO OF WAYS TO ACHIEVE	FORMULA				PREDICTED VALUE			
					1 CREDIT	2 CREDIT	3 CREDIT	MAXBET	1 CREDIT	2 CREDIT	3 CREDIT	MAXBET
1	STAR	MEGA	STAR	1	$60X_1$	$120X_1$	$200X_1$	$200X_2$	266.6872	533.3745	888.9575	1416.521
3	SEVEN	MEGA	SEVEN	2	$40X_1$	$80X_1$	$120X_1$	$120X_2$	177.7915	355.583	533.3745	849.9126
2	SEVEN	SEVEN	SEVEN	4	40	80	120	120	40	80	120	120
3	3BAR	MEGA	3BAR	4	$30X_1$	$60X_1$	$90X_1$	$90X_2$	133.3436	266.6872	400.0309	637.4344
4	3BAR	3BAR	3BAR	4	30	60	90	90	30	60	90	90
5	2BAR	MEGA	2BAR	9	$20X_1$	$40X_1$	$60X_1$	$60X_2$	88.89575	177.7915	266.6872	424.9563
6	2BAR	2BAR	2BAR	36	20	40	60	60	20	40	60	60
7	1BAR	MEGA	1BAR	12	$10X_1$	$20X_1$	$30X_1$	$30X_2$	44.44787	88.89575	133.3436	212.4781
8	1BAR	1BAR	1BAR	36	10	20	30	30	10	20	30	30
9	ANYBAR	MEGA	ANYBAR	47	$4X_1$	$8X_1$	$12X_1$	$12X_2$	17.77915	35.5583	53.33745	84.99126
10	ANYBAR	ANYBAR	ANYBAR	500	4	8	12	12	4	8	12	12
11	ANYTHING	MEGA	STAR	21	$3X_1$	$6X_1$	$9X_1$	$9X_2$	13.33436	26.66872	40.00309	63.74344
12	STAR	MEGA	ANYTHING	21	$3X_1$	$6X_1$	$9X_1$	$9X_2$	13.33436	26.66872	40.00309	63.74344
13	ANYTHING	MEGA	ANYTHING	367	X_1	$2X_1$	$3X_1$	$3X_2$	4.444787	8.889575	13.33436	21.24781
14	STAR	ANYTHING	STAR	21	2	4	6	6	2	4	6	6
15	ANYTHING	ANYTHING	STAR	441	1	2	3	3	1	2	3	3
16	STAR	ANYTHING	ANYTHING	441	1	2	3	3	1	2	3	3

EP 0 944 030 A2

FIG.7A

INDEX	REEL 1	REEL 2	REEL 3
1	3	2	2
2	1	1	1
3	3	3	3
4	1	1	1
5	2	2	2
6	1	1	1
7	2	2	2
8	1	1	1
9	3	2	3
10	1	1	1
11	2	2	2
12	1	1	1
13	3	2	2
14	1	1	1
15	3	2	3
16	1	1	1
17	2	1	3
18	1	2	1
19	2	2	2
20	1	1	1
21	2	2	2
22	1	1	1
23	3	2	2
24	1	1	1
25	2	2	2
26	1	1	1
27	2	2	2
28	1	1	1
29	2	2	2
30	1	1	1
31	2	2	2
32	1	1	1
33	3	3	3
34	1	1	1
35	2	2	2
36	1	1	1

FIG.7B

INDEX	REEL 1	REEL 2	REEL 3
1	2	2	2
2	1	2	1
3	3	3	5
4	1	1	1
5	2	3	2
6	1	1	1
7	2	2	2
8	1	1	1
9	5	3	3
10	1	1	1
11	5	5	5
12	1	1	1
13	2	3	2
14	1	1	1
15	2	2	2
16	1	1	1
17	3	3	3
18	1	1	1
19	2	5	2
20	1	1	1
21	5	5	3
22	1	1	1
23	2	2	2
24	1	1	1
25	3	3	2
26	1	1	1
27	2	3	2
28	1	1	1
29	2	2	2
30	1	1	1
31	2	2	2
32	1	1	1
33	3	5	2
34	1	1	1
35	3	5	1
36	1	1	1

FIG. 7C

	REEL 1		REEL 2		REEL 3	
	MULTIPLIER	IMAGE POS.	MULTIPLIER	IMAGE POS.	MULTIPLIER	IMAGE POS.
1	-	1	-	1	-	1
2	-	-	-	-	-	-
3	-	2	-	2	-	2
4	2	2	2	2	2	2
5	2	2	2	2	2	2
6	2	2	2	2	2	2
7	-	3	-	3	-	3
8	-	3	-	3	-	3
9	-	3	-	3	-	3
10	3	4	3	4	3	4
11	3	4	3	4	3	4
12	3	4	3	4	3	4
13	3	4	3	4	3	4
14	3	4	3	4	3	4
15	-	5	-	5	-	5
16	-	5	-	5	-	5
17	-	5	-	5	-	5
18	-	6	-	6	-	6
19	2	6	2	6	2	6
20	2	6	2	6	2	6
21	2	6	2	6	2	6
22	-	7	-	7	-	7
23	-	7	-	7	-	7
24	-	7	-	7	-	7
25	-	8	-	8	-	8
26	3	8	3	8	3	8
27	3	8	3	8	3	8
28	3	8	3	8	3	8
29	-	9	-	9	-	9
30	-	9	-	9	-	9
31	-	9	-	9	-	9
32	-	9	-	9	2	10
33	-	9	2	10	2	10
34	2	10	2	10	2	10
35	2	10	2	10	2	10
36	2	10	2	10	2	10

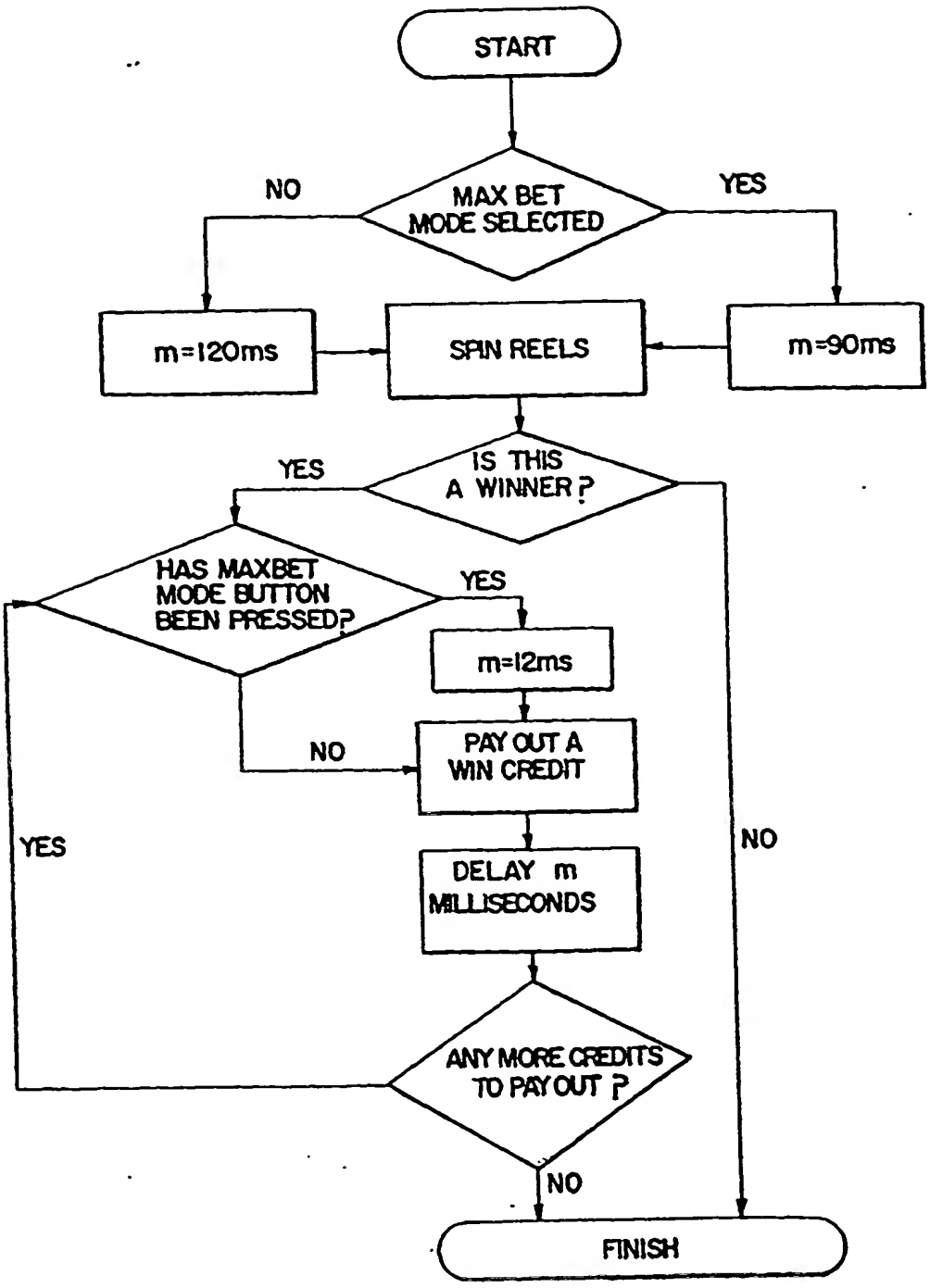
FIG.8

INDEX	MULTIPLIER
1	BLANK
2	2
3	BLANK
4	3
5	BLANK
6	2
7	BLANK
8	3
9	BLANK
10	2

FIG.9

INDEX	REEL1	REEL2	REEL3	EXPECTED PAYOFF/PLAY FOR EACH COMBINATION 1 CREDIT	2 CREDIT	3 CREDIT	MAXBET
1	STAR	MEGA	STAR	0.0250458	0.0500915	0.0834859	0.1330316
3	SEVEN	MEGA	SEVEN	0.0333943	0.0667887	0.0100183	0.159638
2	SEVEN	SEVEN	SEVEN	0.0150263	0.0300526	0.0450789	0.0450789
3	3BAR	MEGA	3BAR	0.0500915	0.0100183	0.1502746	0.239457
4	3BAR	3BAR	3BAR	0.0112697	0.0225394	0.0338092	0.0338092
5	2BAR	MEGA	2BAR	0.0751373	0.1502746	0.2254118	0.3591854
6	2BAR	2BAR	2BAR	0.0676183	0.1352367	0.202855	0.202855
7	1BAR	MEGA	1BAR	0.0500915	0.100183	0.1502746	0.239457
8	1BAR	1BAR	1BAR	0.0338092	0.0676183	0.1014275	0.1014275
9	ANYBAR	MEGA	ANYBAR	0.0784767	0.1569534	0.2354301	0.3751492
10	ANYBAR	ANYBAR	ANYBAR	0.1878287	0.3756574	0.5634861	0.5634861
11	ANYTHING	MEGA	STAR	0.026298	0.0525961	0.0788941	0.1257149
12	STAR	MEGA	ANYTHING	0.026298	0.0525961	0.0788941	0.1257149
13	ANYTHING	MEGA	ANYTHING	0.1531966	0.3063931	0.4595897	0.7323392
14	STAR	ANYTHING	STAR	0.0039444	0.0078888	0.0118332	0.0118332
15	ANYTHING	ANYTHING	STAR	0.0414162	0.0828325	0.1242487	0.1242487
16	STAR	ANYTHING	ANYTHING	0.0414162	0.0828325	0.1242487	0.1242487
			TOTAL	0.9203589	1.8407177	2.7694252	3.6966744
			PERCENTAGE PAYOFF	92.035886	92.035886	92.314172	92.41686

FIG.10


START
MAX BET MODE SELECTED
NO
YES
m=120ms
SPIN REELS
m=90ms
IS THIS A WINNER?
YES
HAS MAXBET MODE BUTTON BEEN PRESSED?
YES
m=12ms
NO
PAY OUT A WIN CREDIT
YES
NO
DELAY m MILLISECONDS
ANY MORE CREDITS TO PAY OUT ?
NO
FINISH